Network Time Protocol (NTP)

SYSTEM DESCRIPTION

Network Time Protocol (NTP) provides the mechanisms to synchronize time and coordinate time distribution in a large, diverse Internet. It uses a returnable-time design in which a distributed subnet of timeservers operating in a self-organizing, hierarchical-master-slave configuration synchronizes local clocks within the subnet and to national time standards via wire or radio. The servers can also redistribute reference time via local routing algorithms and time daemons.

The accuracies achievable by NTP depend strongly on the precision of the local-clock hardware and stringent control of device and process latencies. Provisions must be included to adjust the software logical-clock time and frequency in response to corrections produced by NTP. This design includes offset-slewing, frequency compensation and deglitching mechanisms capable of accuracies in the order of a millisecond, even after extended periods when synchronization to primary reference sources has been lost.

INTEROPERABILITY CERTIFICATION STATUS

Please refer to the Joint GCCS Interoperability Status Table